Varimixer

FOOD MIXER

Model W20 A, J, F
1993 to Present

SPARE PART AND OPERATION MANUAL

June 2012
Form 103

Caution -READ BEFORE OPERATING- Caution

Varimixer recommends that mixer operators be at least 18 years of age and be thoroughly trained on the use of the mixer.

Varimixer recommends that the following precautions be adopted to help make the mixer operation safer and more efficient.

- All operators should be at least 18 years of age.
- All operators should be thoroughly trained before being allowed to operate the mixer.
- NEVER reach into the bowl when the mixer is running.
- Do not wear loose clothing or rings while operating the mixer.
- Stop the mixer and lower the bowl before adding ingredients, scraping the bowl, removing the agitator, or removing the product.
- Stop the mixer before removing or installing attachments into the drive hub.
- Do not attempt to assemble or disassemble attachments while mounted into the drive hub.
- Always use the pusher plate with the slicer/meat grinder attachments.
- NEVER bypass the safety mechanisms supplied on the mixer. Doing so can cause injury and is the responsibility of the user to insure these safety mechanisms are operating properly.

Varimixer

LIMITED WARRANTY

Varimixer warrants its commercial mixers to the original purchaser against defects in material or manufacture for a period of one year from the date of original purchase, subject to the following exclusions and limitations. The warranties provided by Varimixer do not apply in the following instances:

EXCLUSIONS

1. In the event that the equipment is improperly installed. Proper installation is the responsibility of the installer, proper installation procedures are covered in the Varimixer Spare Parts and Operations Manual.
2. In the event that the equipment is improperly maintained. Proper maintenance is the responsibility of the user. Proper maintenance procedures are covered in the Varimixer Spare Parts and Operations Manual.
3. In the event that failure or malfunction of the appliance or any part thereof is caused by abnormal use or is otherwise not attributable to a defect in material or manufacture.
4. In the event that the appliance , by whatever cause, has been materially altered from the condition in which it left the factory.
5. In the event that the rating plate has been altered or removed.
6. On parts which would normally be worn or replaced under normal conditions.
7. With regard to adjustments and/or calibrations. Checking of and changes in adjustments and calibrations are the responsibility of the installer, Proper installation is the responsibility of the installer, proper installation procedures are covered in the Varimixer Spare Parts and Operations Manual.

If any oral statements have been made regarding the appliance, such statements do not constitute warranties and are not part of the contract of sale. This Limited Warranty constitutes the complete, final and exclusive statement with regard to warranties.

THIS LIMITED WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES WHETHER WRITTEN, ORAL OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE OR WARRANTY AGAINST LATENT DEFECTS.

LIMITATIONS OF LIABILITY

In the event of warranty claim or otherwise, the sole obligation of Varimixer shall be the repair and/or replacement at the option of Varimixer, of the appliance or component or part thereof Such repair or replacement shall be the expense of Varimixer *except* that travel over 100 miles or two hours, overtime, and holiday charges shall be,, the expense of the purchaser. Any repair or replacement under this warranty does not constitute an extension of the origin, warranty for any period for the appliance or for any component part thereof. Parts to be replaced under this warranty will be repaired or replaced at the option of Varimixer with new or functionally operative parts. The liability of Varimixer on any claim of any kind, including claims based on warranty, expressed or implied, contract, negligence, strict liability or any other theories shall be solely and exclusively the repair or replacement of the product as stated herein, an such liability shall not include, and purchaser specifically renounces any rights to recover, special, incidental, consequential or other damages of any kind whatsoever, including, but not limited to, injuries to persons or damage to property, loss of profits or anticipated profits, or loss of use of the product.

TO SECURE WARRANTY SERVICE

If you claim a defect covered by this Limited Warranty, first direct your claim to the local Authorized Service Agency, giving model, serial and code numbers, voltage, a description of the problem and your sales slip. If this procedure fails to be satisfactory to you, you may write to the Varimixer National Service Manager, 14240 South Lakes Drive, Charlotte, NC 28273; you should include the information listed above.

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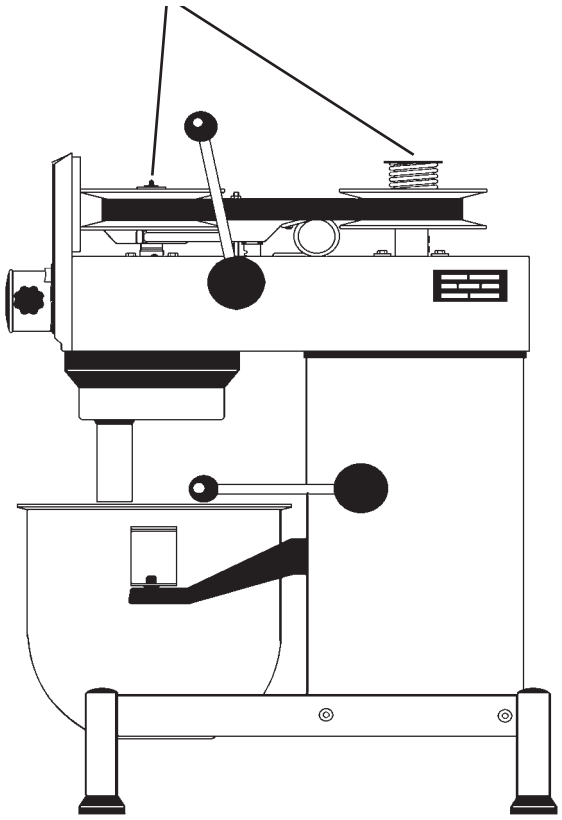
INSTALLATION - CLEANING - MAINTENANCE

INSTALLATION:
The mixer can be placed directly on the floor. Foundation bolts in the floor are necessary only under special conditions, e.g. in ships.
If the 20-quart mixer is placed on a bench stand, it must be fastened with the bolts that fasten the unit to the shipping pallet.
Ensure that the voltage, phase and hertz printed on the identification plate of the mixer are the same as that at the place of installation. The identification plate is located at the top of the right side of the mixer. Be sure the mixer is properly connected to the incoming power supply and the ground or earth connection is made. The arrow on the front of the planetary head (see drawing 2, page 1), indicates the direction of rotation of the planetary head. On three-phase motors the direction of rotation can be changed by interchanging two phases of the connecting cable or the motor. Electrical connections must be made in accordance with local regulations.

Lubrication Points



DOUGH HOOK CLEANING:
Special care should be given to cleaning the dough hook. The Varimixer dough hook is manufactured of stainless steel and we recommend that it be cleaned and sanitized in a commercial dish machine. An alternate cleaning procedure is to vigorously scrub the dough hook with a hot water and detergent solution. Use a heavy bristled brush. After cleaning, sanitize the dough hook by rinsing with a 50 ppm solution of sodium hypochlorite.

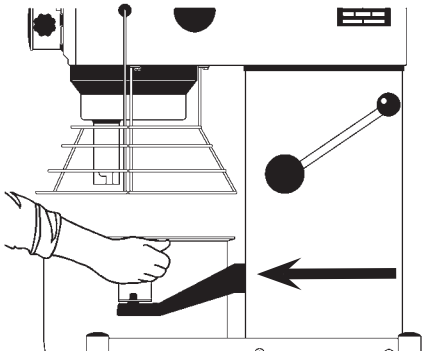
CLEANING:
The mixer should be cleaned daily or after use. Wash with a soft brush and pure water. Synthetic detergents should be used with care as they destroy the lubricants of the mixer. Washing with a hose is not recommended. Bowls and mixing tools should be washed in detergents which do not attack aluminum. Detergent suppliers will be able to recommend the right type.

LUBRICATION AND MAINTENANCE:
When the mixer is used regularly, the varispeed system must be lubricated approximately once each month. When the mixer is extensively used, or used often without changes in speed, lubrication intervals should be shorter.

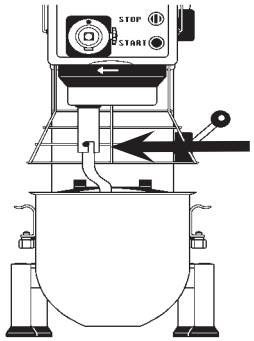
DIRECTIONS FOR LUBRICATION:
Start the mixer and increase the speed to approximately 50%. Stop the mixer and remove the top cover by removing the two screws (2), see page 2-3.
A grease nipple is located at the top of each of the pulley sets. Press the grease through the grease nipples until the grease gun feels hard, or until grease is pressed out between the shaft and the pulleys.
Replace the top cover and remember to replace the two screws securing the cover.
The lid must be mounted before starting the mixer.
Start the mixer and set the speed back to low.
Stop the mixer and fill the grease gun with new grease to be prepared for the next lubrication.

TYPES OF GREASE:
Grease for the shafts of the pulley sets: Lubriplate 1200-2, or another ball bearing grease: NLGI1 or NLGI 2.
When repairing the planetary head (which is greased for life) the grease (PN 868VH) should be used in the gear wheel, gear wheel rim. The needle bearings of the planetary head should be greased with PN Sapphire 2 The needle bearings must not be greased with the PN 868 VH type of grease.
Use only this type grease and do not mix with other types of grease.

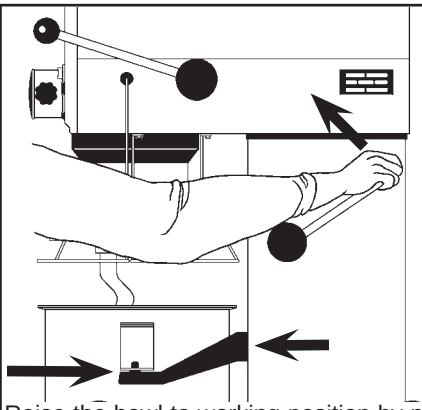
Varimixer Operating Instructions W20



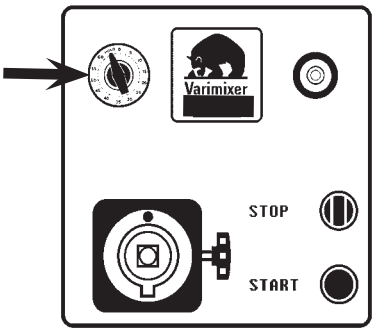
Place the bowl in the bowl arms. Be sure that the bowl is placed correctly and the bowl clamps are used.



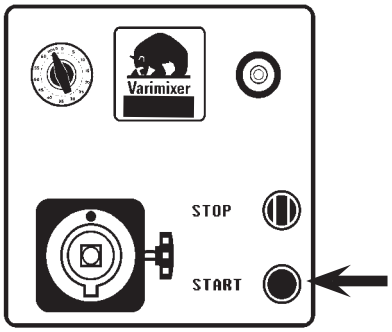
Place the mixing tool in the bayonet shaft. The pin of the tool must be turned into the bayonet hole.



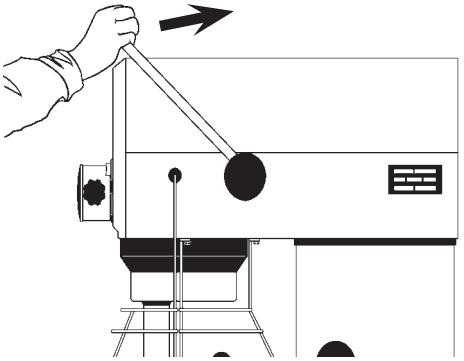
Raise the bowl to working position by pulling the handle forward. Ensure that the bowl is placed correctly while the bowl is lifted. Close the bowl screen.



Set the time required by turning the timer to the right. The mixer will stop automatically when the time runs out.



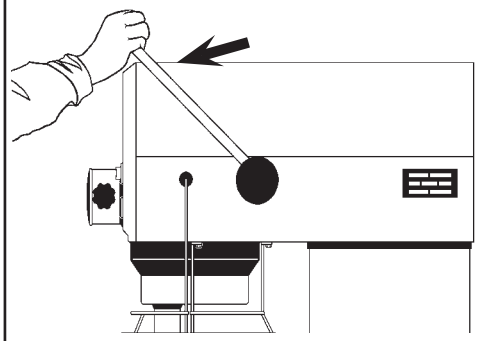
Start the mixer by pressing the green start button. The mixer will only start with the timer on and the bowl screen closed.



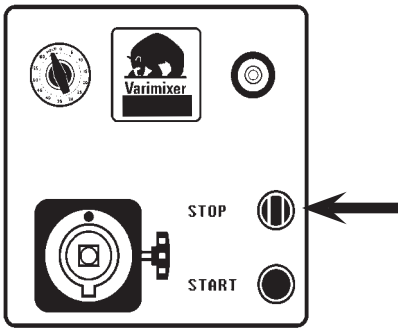
Push the speed selector lever to obtain the required speed. **The speed must be changed only when the mixer is running**.

Dough Hook
100 R.P.M.
Flat Beater
250 R.P.M
Wire Whip
400 R.P.M.

Recommended maximum speeds



Before the mixer is stopped, the speed selector lever should be moved to the lowest speed. The mixer must not be started when loaded in high speed position.



Stop the mixer by pressing the red stop button.

OVERLOADING: Do not overload the mixer. Tough and heavy doughs might reduce the working capacity of the mixer by 75%. The capacity will be further reduced if the speed of the tool is increased beyond what is recommended, or if a wrong tool is used. Big lumps of grease or cooled ingredients must be divided into fine particles before being placed into the bowl. A long period of overloading will cause the thermal overload relay to stop the mixer. Let the mixer rest for approximately three minutes and press the RED STOP button BEFORE pressing the GREEN START button.

If the mixer is stopped in high speed when loaded, the bowl is to be removed from the mixer and the speed set to low speed before the bowl is placed in the mixer again.

WARNING: Bodily harm could result from placing hands into the bowl while the mixer is running.

Varimixer Specifications W20

Dimesion Data

Level Capacity of large bowl	Qt.	2 1
Level Capacity of small bowl	Qt.	1 3
Width Overall	In.	17 7/8
Depth Overall	In.	26 1/2
Height Overall	In	34 7/8

Electrical Data for Motor**

60HZ / 1 Phase		
Voltage*	V	115
Feed Wires incl. Ground	No.	3
Motor Power	HP	1
Amperes,full load	A	12

Mixing Speed

Agitator Speed	Min.	100
Agitator Speed	Max.	400
Attachment Hub	R.P.M.	90-420

Shipping Data

Basic Machine plus 1 s/s bowl,1 set of standard tools

Measurement		
Shipping Box		
Width	In.	28 ½
Depth	In.	30 ½
Height	In.	46 ½
Volume	Cu.Ft.	23.4
Weight Data		
Net Weight	Lbs.	196
Gross Weight	Lbs.	233

Capacity Chart

Mashed Potatoes	Whip or Beater	17 lbs.
Whipped Cream	Whip	4 Qts.
Muffins	Beater	24 lbs.
Layer Cake	Beater	23 lbs.
Pie Dough	Pastry Knife	21 lbs.
Pancake Batter	Whip or Beater	9 Qts.
Cookie Dough	Beater or Hook	14 lbs.
Donuts,Yeast	Hook	20 lbs.
Donuts,Cake	Beater	23 lbs.
Bread Dough (65% AR)	Hook	25 lbs.
Pizza Dough (50% AR)***	Hook	12 lbs.

%AR= weight of water
weight of flour

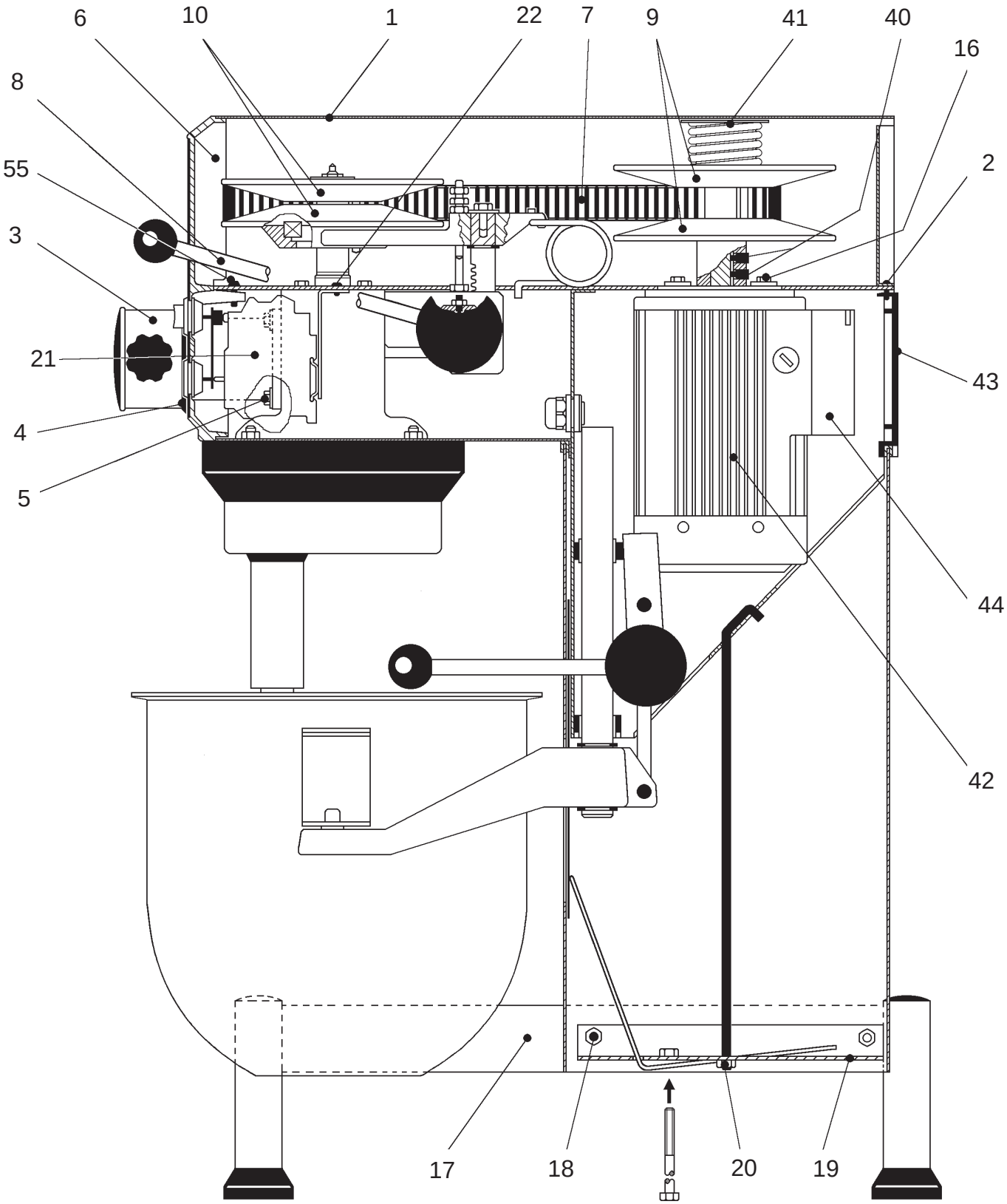
*On the nominal motor voltage + or – 10% tolerance is allowed.

**Also available in 220/60/1 , 220/50/1 , 110/50/1. Not submitted for UL listing.

***Varimixer also features our Model W20P , specifically designed for pizza and pretzel dough.

Specifications are subject to change without notice.

SERVICE INSTRUCTIONS



SERVICE INSTRUCTIONS

(1) Remove the top cover of the mixer (1) and the plastic cover (43) by removing the 2 screws

(3) The attachment engagement hub is taken out by removing the plastic cover (4) and the 4 bolts (5).

(6) The control box is taken off by removing the 2 screws (55).

(7) The special V-belt is replaced in the following way:

a) Remove the top cover of the mixer (1) and the plastic cover (43).

b) Press the speed selector lever (8) back toward the back of the mixer so that the special V-belt is loosened, and take off the special V-belt.

c) The special V-belt is mounted by first placing it on the rear pulley set (9) (the motor pulley set) and opening the pulleys by pulling the special V-belt.

d) Turn the speed selector lever (8) back toward the back of the mixer (high speed) and mount the special V-belt on the front pulley set (10).

e) Adjust the speed (see page 8).

(9) The motor pulley set is taken off in the following way:

a) Remove the top cover of the mixer (1), the plastic cover (43), the special V-belt (7)

b) The motor pulley set can now be taken off by loosening the~ 2 screws (40).

The upper half of the pulley set can be taken off by removing the circlip (41).

(21) Relay and thermal overload relay are taken out in the following way:

a) Remove the top cover of the mixer (1), the plastic cover (43), the special V-belt (7), and the control panel (6).

b) Loosen the screws (22).

c) If the relay is to be replaced, the screw (57) is removed.

Before relay and thermal overload relay are taken out, the mixer must (for safety reasons) be disconnected on the main switch or the connecting cable disconnected.

The indicator (23) on the side of the thermal overload relay is adjusted to the rated current of the motor + 10%.

(42) The motor is removed in the following way:

a) Switch off the voltage to the mixer or disconnect the connecting cable.

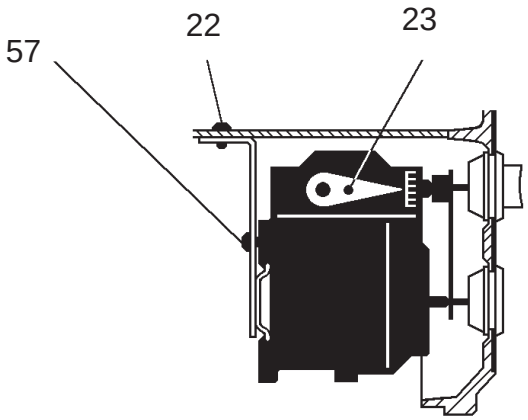
b) Remove the top cover of the mixer (1), the plastic cover (43), the special V-belt (7), and the motor pulley set (9).

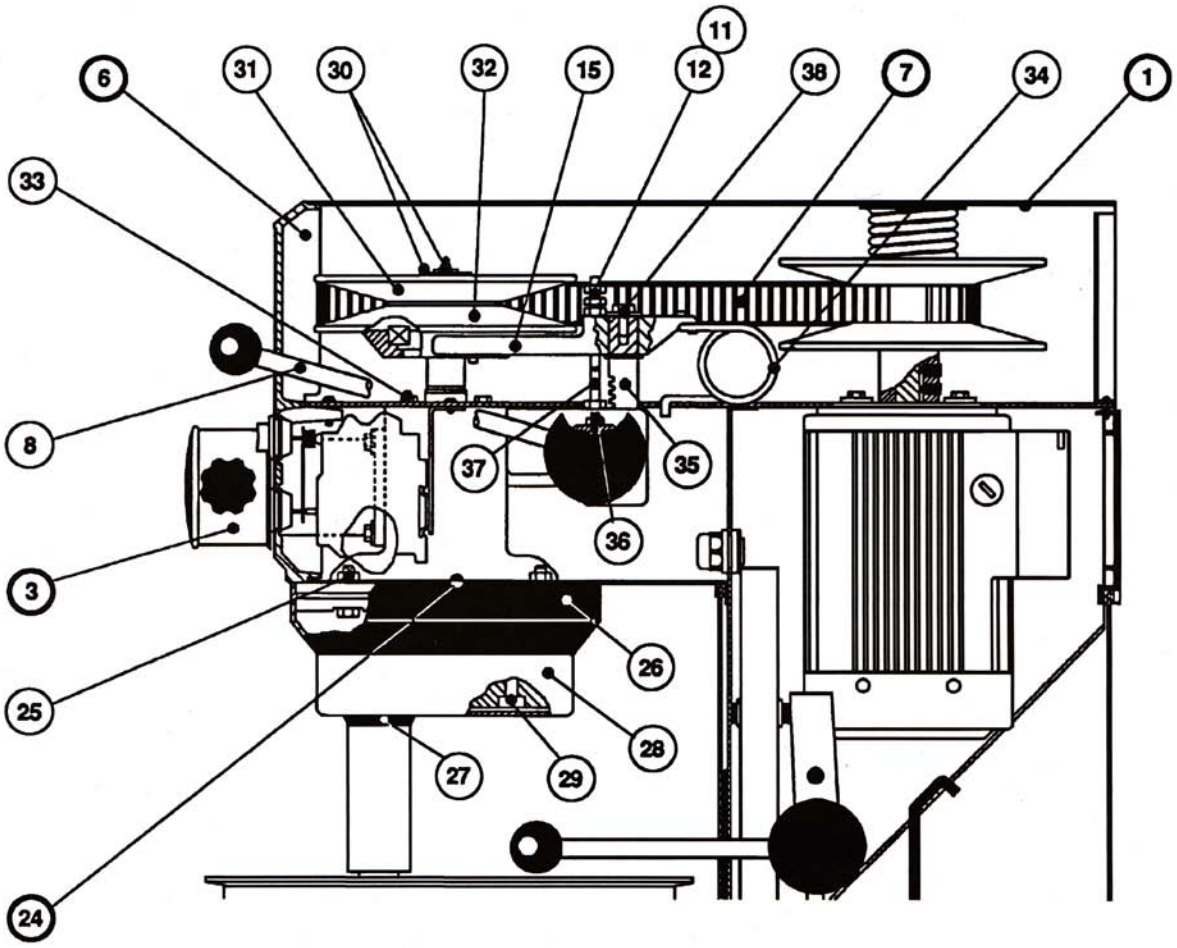
c) Remove the motor cable from the connecting box (44) of the motor.

d) Place the mixer on its back.

e) Remove the legs of the mixer (17) and the bottom plate (19).

f) The motor can be pulled out backwards by removing the 4 bolts (16)





The planetary head is removed in the following way:

a) The top cover of the mixer (1), the attachment engagement hub (3), the special V-belt (7), and the control box (6) are removed.

b) The plastic ring (26) can be removed by knocking it gently on the front edge, then pressing a screwdriver between the plastic ring and the metal plate at the top of the plastic ring.

c) Remove the rubber ring (27).

d) The stainless headcap (28) can now be removed by knocking it gently on the front edge with a plastic hammer, turning the planetary head 1800, and again knocking gently on the front edge.

e) If only the lower part of the planetary head is to be repaired, the planetary head can be separated by removing the 3 bolts (29).

f) Remove the grease nipple and washer (30), and pull off the upper half of the pulley set (31) with an extractor.

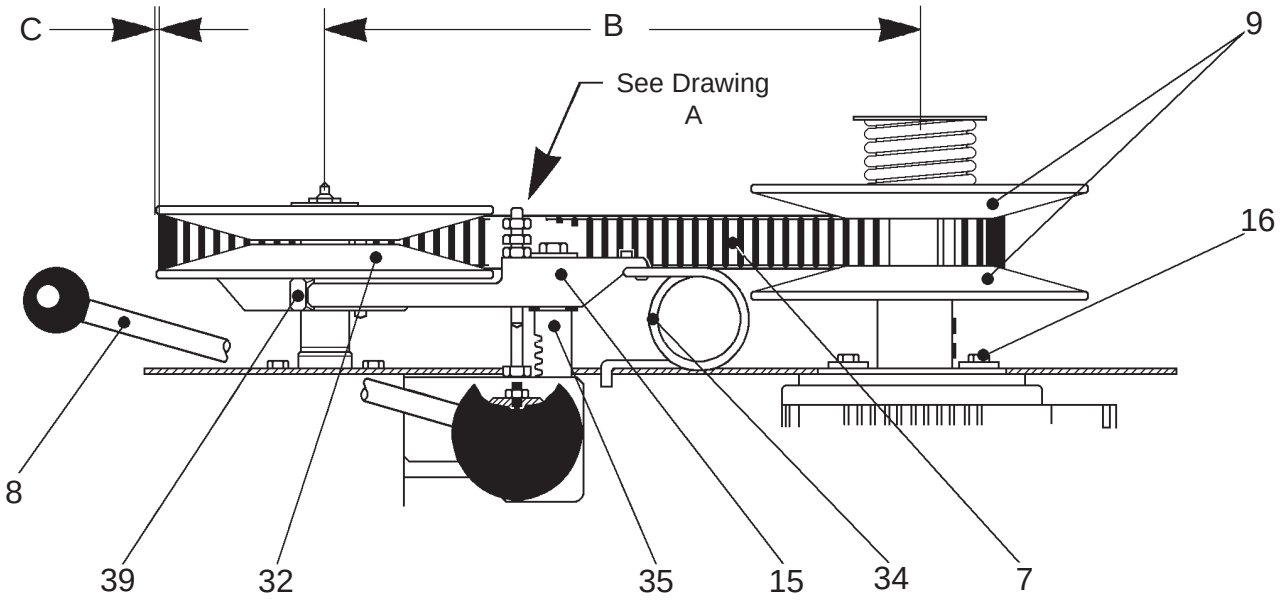
g) Take off the movable part (32) of the pulley set. h) Take off the 4 screws (33).

h) The spring (34) is removed in the following way: The nuts (11) and (12) are removed. The lower fork (15), the toothed rack (35) and the spring (34) will come up also when the nut (12) is removed. If the toothed rack (35) is to be replaced, this can be done when the lower fork (15) is free. Remove the bolt (38) and the toothed rack can be replaced.

i) When the counter nut and the pointed screw (36) are removed, the speed selector lever (8) can be removed.

k) Remove the pin bolt (37) by loosening the counter nut.

l) By loosening and removing the 4 bolts (25), the planetary head can be lowered.

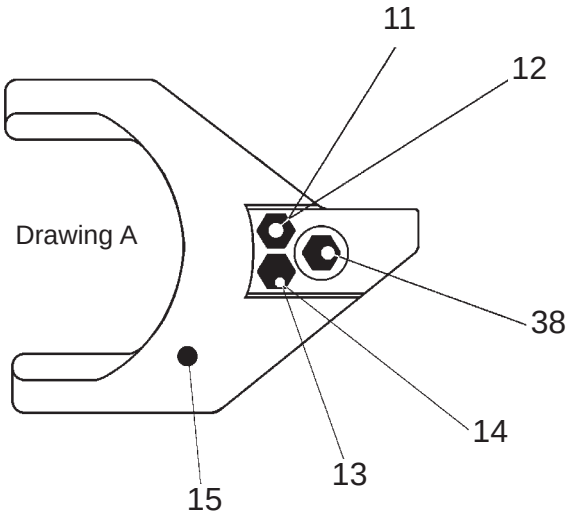


Mounting of the planetary head should be done in reverse order.

When the lower fork (15) and the spring (34) are mounted, the speed selector lever (8) is turned counter clockwise, so that it points horizontally backward, at the same time as the lower fork is pressed down gently. When the speed selector lever (8) is turned clockwise, it will catch the toothed rack (35) and pull down the lower fork. Screw on the nuts (11) and (12).

Be aware that the pin (39) on the lower part (32) of the pulley set is to be placed as shown in the drawing above.

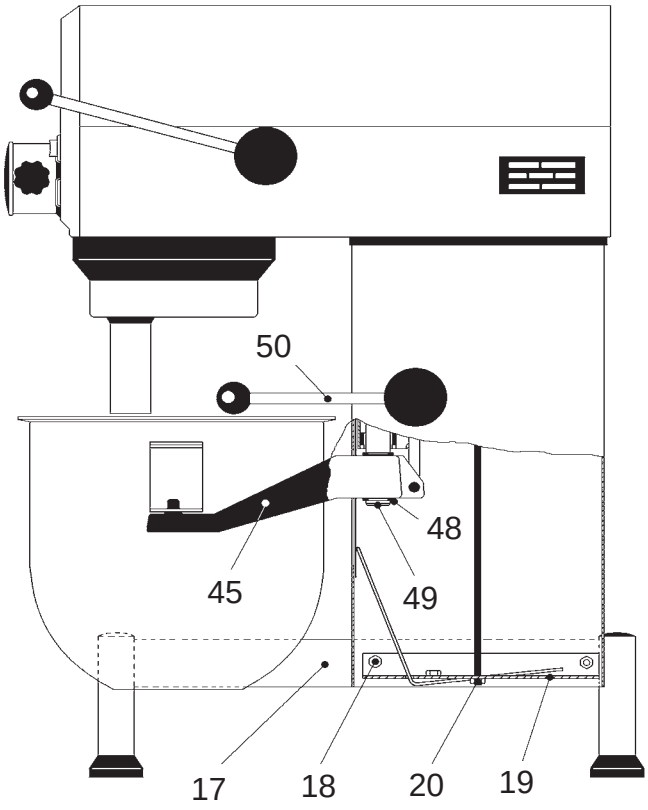
When all parts have been mounted, the speed must be adjusted.

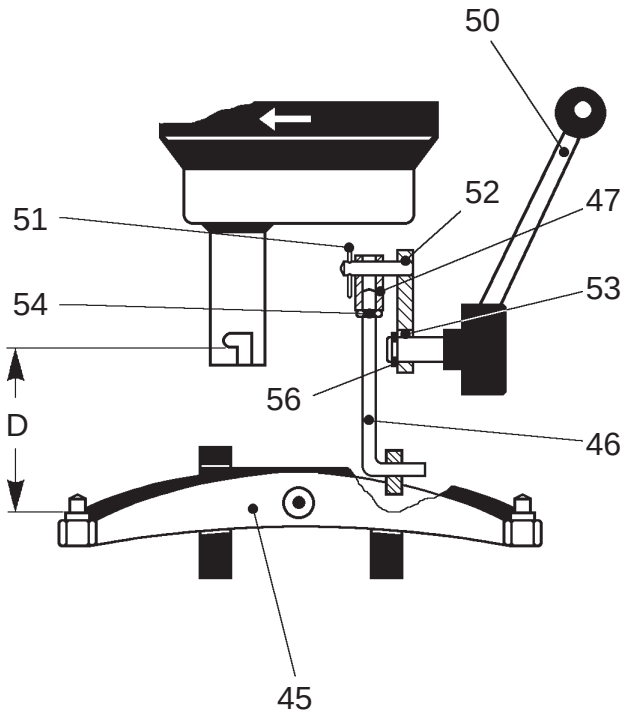


Adjustment of speed and belt

a) Adjust the distance (8) 12.6", by loosening the 4 bolts (16) and moving the motor back and forth. The tolerance of the distance (B) can be used in cases where there are problems in adjusting the speed correctly, as the distance (B) is dependent on the tolerance of the special V-belt.
b) Loosen the lock nut (11) and the adjusting nut (12).
c) Start the mixer and adjust the lowest speed so that the special V-belt (7) is approximately 1/16 to 1/8" (C) from the pulley edge.
d) Stop the mixer and tighten the adjusting nut (12) loosely and then the lock nut (11)
e) Loosen the lock nut (13) and the adjusting screw (14).
f) Start the mixer and adjust the highest speed so that the special V-belt (7) is approximately 1/16 to 1/8" (C) from the pulley edge of the motor pulley set (9).
g) Stop the mixer and tighten the adjusting screw (14) loosely and then the lock nut (13).
h) Start the mixer and control the measure (C) on both pulley sets at high and low speed, respectively.
i) Be aware that the pin (39) on the lower part (32) of the pulley set is to be placed as shown on the drawing above.

Tolerances in the transmission can cause the special V-belt (7) to hit the pins of the pulley sets when the speed has been adjusted. In these cases, the distance (B) is to be reduced and the speed readjusted.





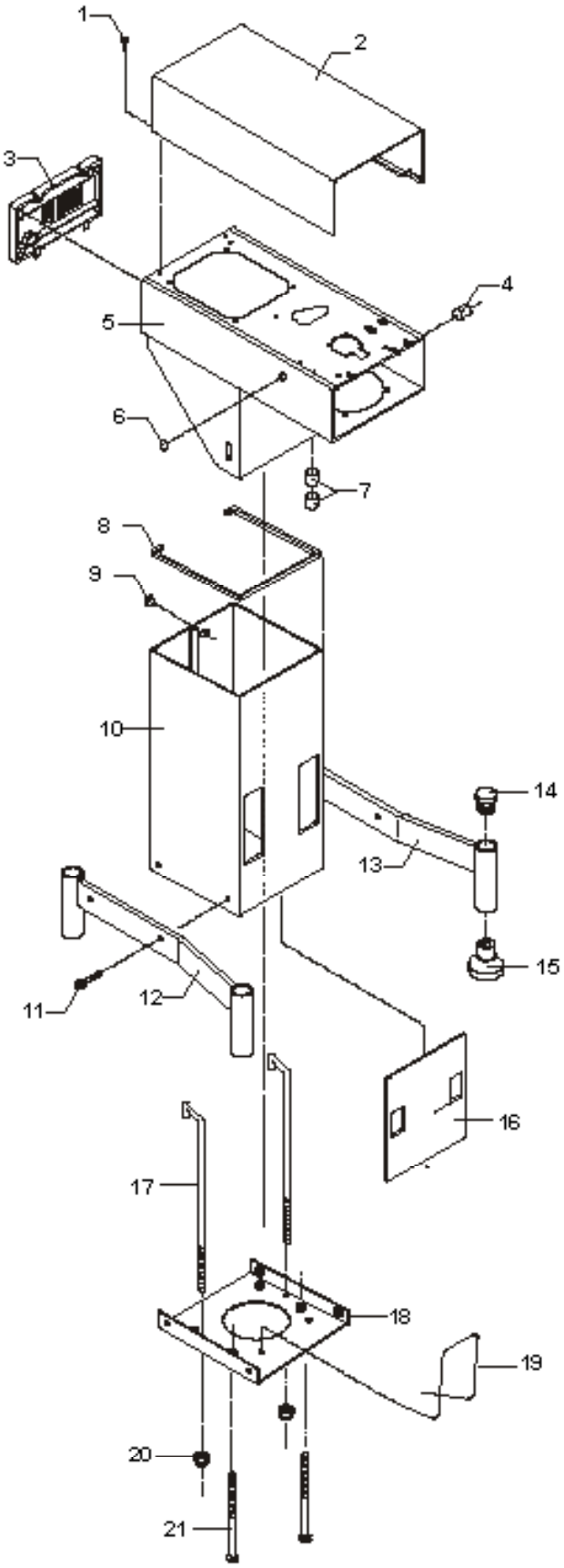
(45) <u>The bowl arms</u> are to be replaced in the following way:
a) Disconnect the mixer on the main switch or disconnect the connecting cable.
b) Lower the bowl arms.
c) Place the mixer on its back and remove the legs of the mixer (17) by removing the screws (18).
d) The bottom plate (19) is removed by removing the nuts (20).
e) Remove the cotter pin (51), securing the lifting bolt (46) and the lifting nut (47).
f) Remove the lifting bolt (46) and the lifting nut (47).
g) Remove the 2 circlips (48) from the 2 bowl arm guide rods (49); then the bowl arm guide rods (49) can be knocked back so that the bowl arms are free and can be removed.

(50) <u>The lifting lever</u> is replaced in the following way:
a) Begin as described above from a) to f) inclusive.
g) Remove the crank shaft (52) by removing the circlip (56). h) Ensure that the key (53) has also been removed.
i) Remove the lifting lever (50).

<u>Adjustment of bowl height</u>
a) Lower the bowl arms.
b) Loosen the counter nut (54) and remove the cotter pin (51).
c) Remove the lifting bolt (46) and the lifting nut (47).
d) Adjust the bowl height by turning the lifting nut (47) either out or in, on the lifting bolt (46).
e) Mount the lifting bolt with the lifting nut and the cotter pin, and tighten the counter nut (54).
f) Ensure that the measure (0) 5" is correct when the bowl is raised to normal working position, and repeat the procedure if the measure is not correct.
g) Ensure that all mixing tools are fitting in the bowl.

Notes:

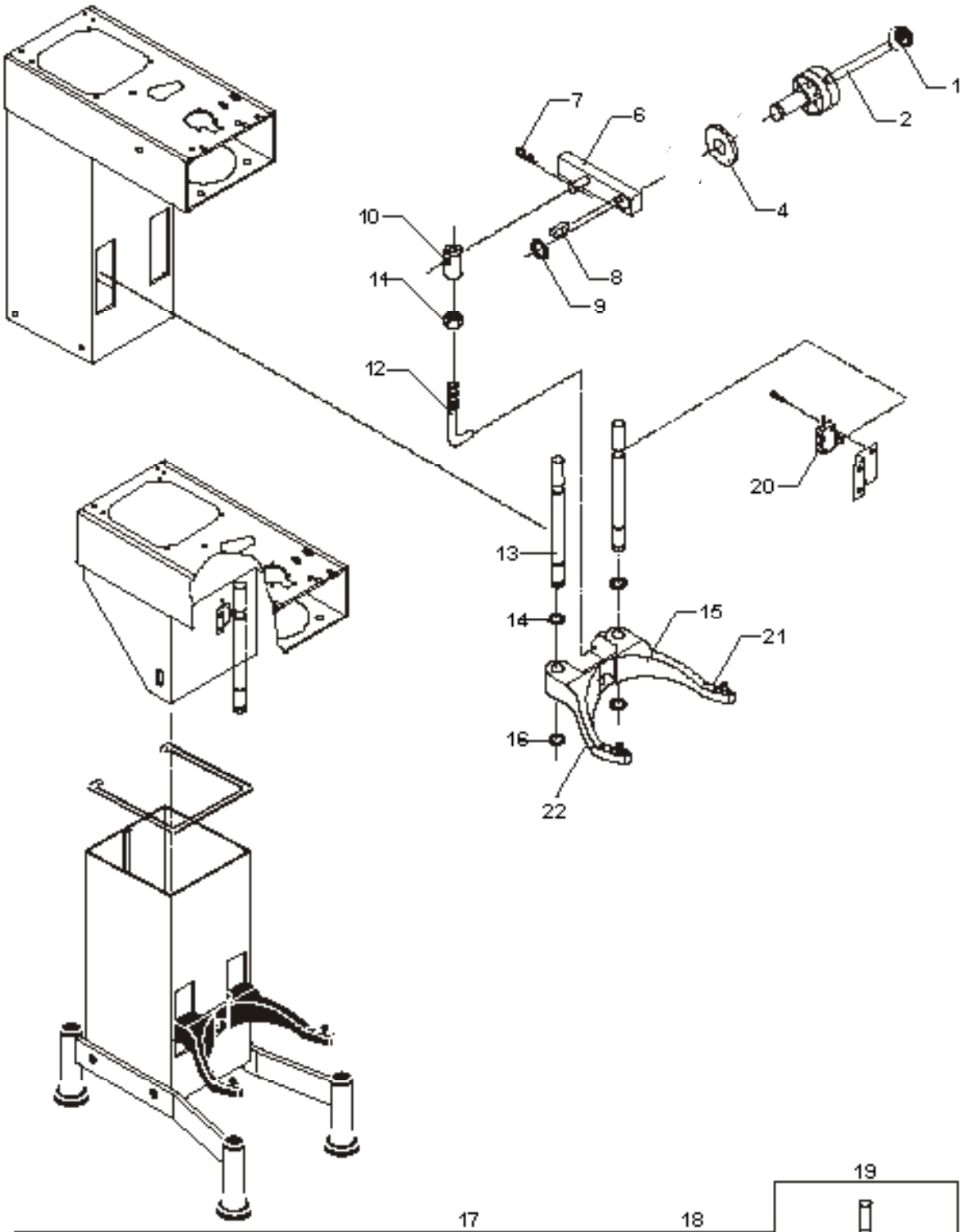
Body



Body

Figure Number	Description	Part Number
1.	Screw	STA 5233
2.	Top Lid (Painted)	20D-21
3.	Rear Access Plate	20N-291
4.	Bushing (Lift Handle)	STA 2515
5.	Upper Column	20N-22.17 STA
6.	Plug Button	6561
7.	Bushings	STA 2514 (each)
8.	Column Seal	20N-207
9.	Plug Button	STA 6511
10.	Lower Column	20N-22.30
11.	Bolt M8X20	STA 5631
12.	Leg Left	20N-25.1
13.	Leg Right	20N-25.2
14.	Plug Button	STA 6560
15.	Rubber Foot	20N-218
16.	NSF Cover Plate	20N-304
17.	Suspension Hook	20N-302
18.	Column Base Plate	20N-22.35
19.	Retaining Spring f/Plate	20N-310
20.	Lock Nut M6	STA 5831
21.	Mixer Mount Bolt	STA 5441

Bowl Arms



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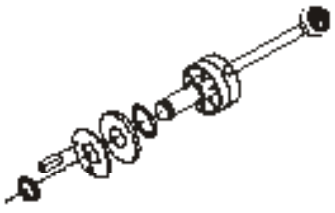
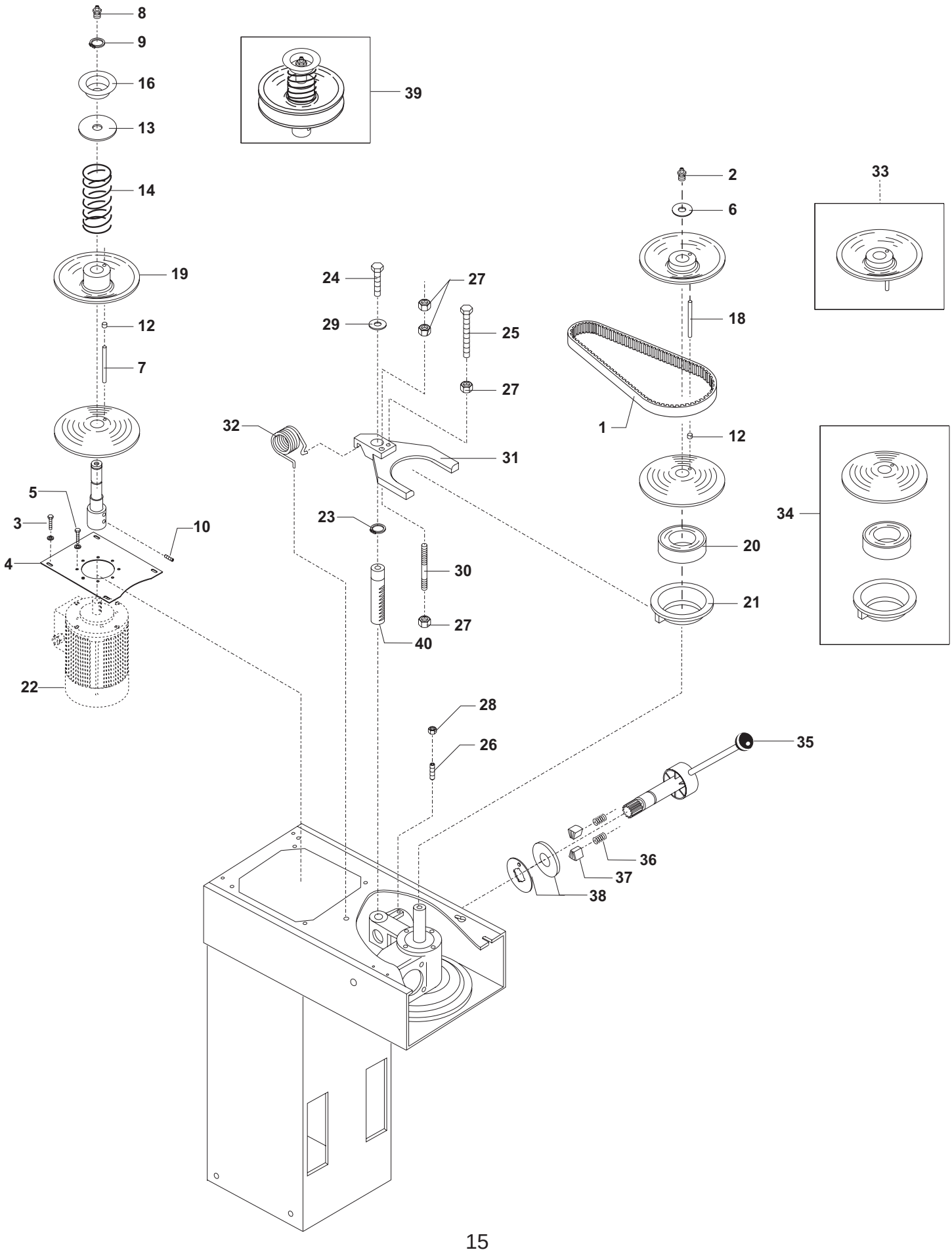
			
56RN20-15	20N-62Z	20N-65.1M	20N-65.1M

Bowl Arms

Figure Number	Description	Part Number
1.	Ball (Black)	STA 3306
2.	Bowl Lift Lever	20N-62Z
3.	Washer	STA 6066
4.	Disc	20N-47.10
5.	Retaining Disc	20N-47.11
6.	Crank Arm	20N-63M
7.	Cotter Pin	STA 6204
8.	Key	STA 2019
9.	Snap Ring	STA 3407
10.	Lift Nut	20N-65.1Z
11.	Jam Nut	STA 5825
12.	Lift Bolt	20N-83.1
13.	Bowl Arm Shaft	20N-68.1M
14.	Snap Ring 25U	STA 3410
15.	Bowl Arm	20N-23M
16.	Snap Ring 25U	STA 3410
17.	Bowl Lift Lever Assembly	20N-62Z
18.	Lift Bolt Assembly	20N-65.1M
19.	Bowl Arm Shaft	20N-68.1M
20.	Bowl Lift Microswitch Assembly	56RN20-15
21.	Right Bowl Clamp	20N-23.5
22.	Left Bowl Clamp	20N-23.4

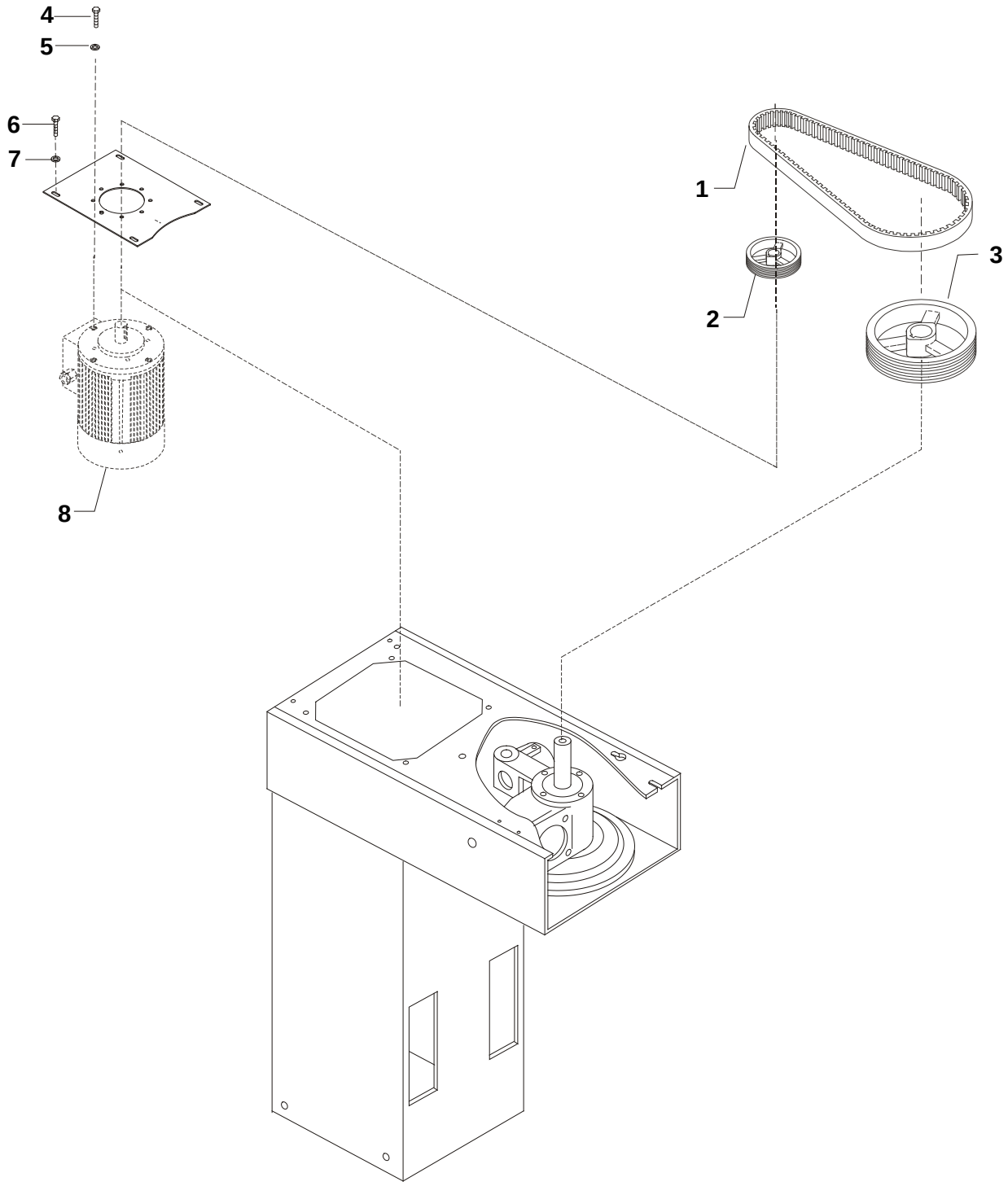
Pulley System



Pulley System

Figure Number	Description	Part Number
1.	Belt	20-91
2.	Grease Nipple	STA 3220
3.	Bolt M6x16	STA 5432
4.	Motor Mount Plate	20N-61
5.	Bolt 3/8-16 X 3/4	STA 5442
6.	Washer	STA 6018
7.	Motor Pulley Pin	60-285
8.	Grease Nipple	STA 3220
9.	Snap Ring	STA 3410
10.	Set Screw	STA 5604
11	----------	----------
12.	Bushing	STA 2505
13.	Rubber Ring	20N-228
14.	Spring	20N-275
15.	----------	----------
16.	Spring Holder	20N-227
17.	----------	----------
18.	Pulley Pin	20-285
19.	Motor Sliding Vari-Pulley	20N-15M
20.	Bearing	15-103
21.	Fork Ring	15-17
22.	Motor 115v1 1HP	20N-85.63
23.	Snap Ring	STA 3407
24.	Bolt	STA 5451
25.	Bolt	STA 5452
26.	Set Screw	STA 5601
27.	Nut	STA 5812
28.	Nut	STA 5819
29.	Washer	STA 6028
30.	Pin Bolt	20N-305
31.	Fronk Fork	20N-16.1
32.	Fork Tension Spring	20N-16.5
33.	Upper Pulley Assembly	20N-38M
34.	Lower Pulley Assembly	20N-39M
35.	Speed Lever	20N-47M
36.	Thrust Spring	20N-400
37.	Thrust Pad	20N-47.20
38.	Thrust Washer	20N-47.10
39.	Motor Pulley Assembly	20N-13M
40.	Tooth Rack	20N-46

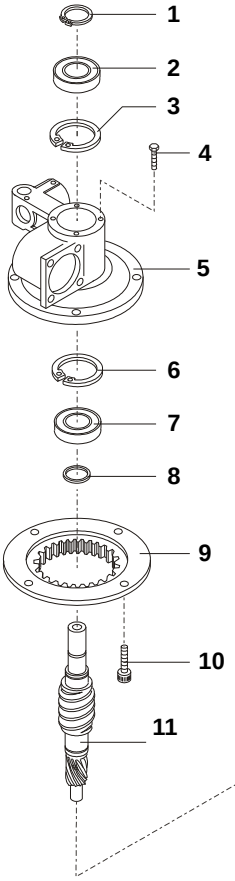
Pulley System Model W20P Single Speed Pizza Mixer

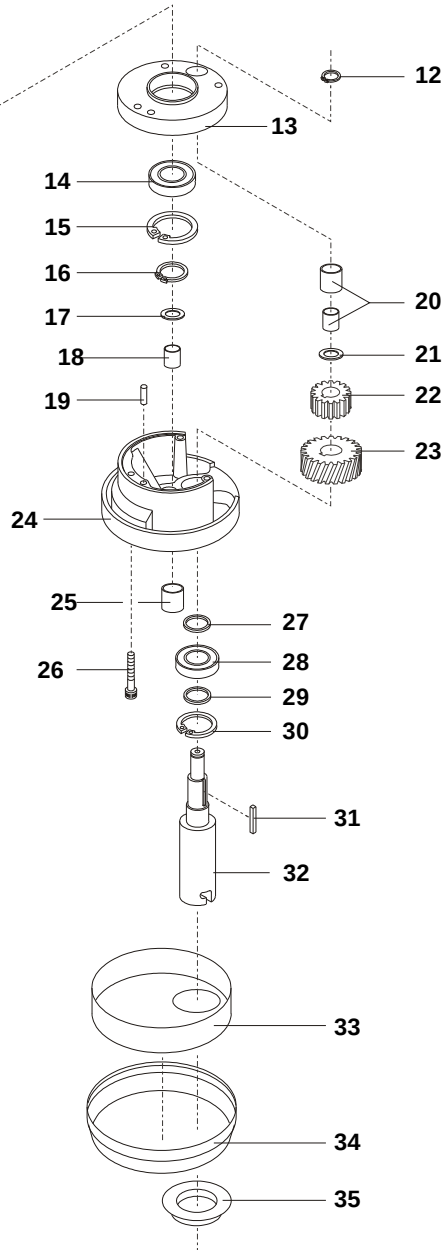


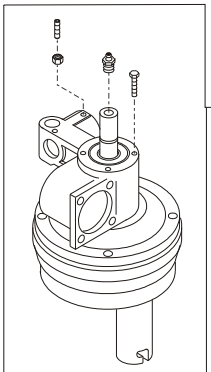
Pulley System Model W20P Single Speed Pizza Mixer

Figure Number	Description	Part Number
1.	Belt	20P-91
2.	Motor Pulley	6J19
3.	Planetary Pulley	6J60
4.	Bolt 3/8-16X3/4	STA 5442
5.	Washer	STA 6009
6.	Bolt M6X16	STA 5432
7.	Washer	STA 6008
8.	Motor	20N-85.63

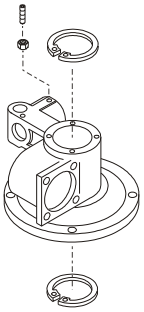
Planetary Head



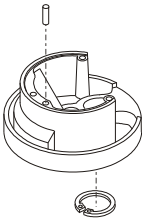




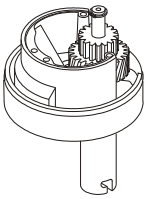
20N-2.1Z



20N-3

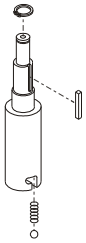


20N-2

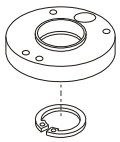


20N-2.1M

20N-30



20-33

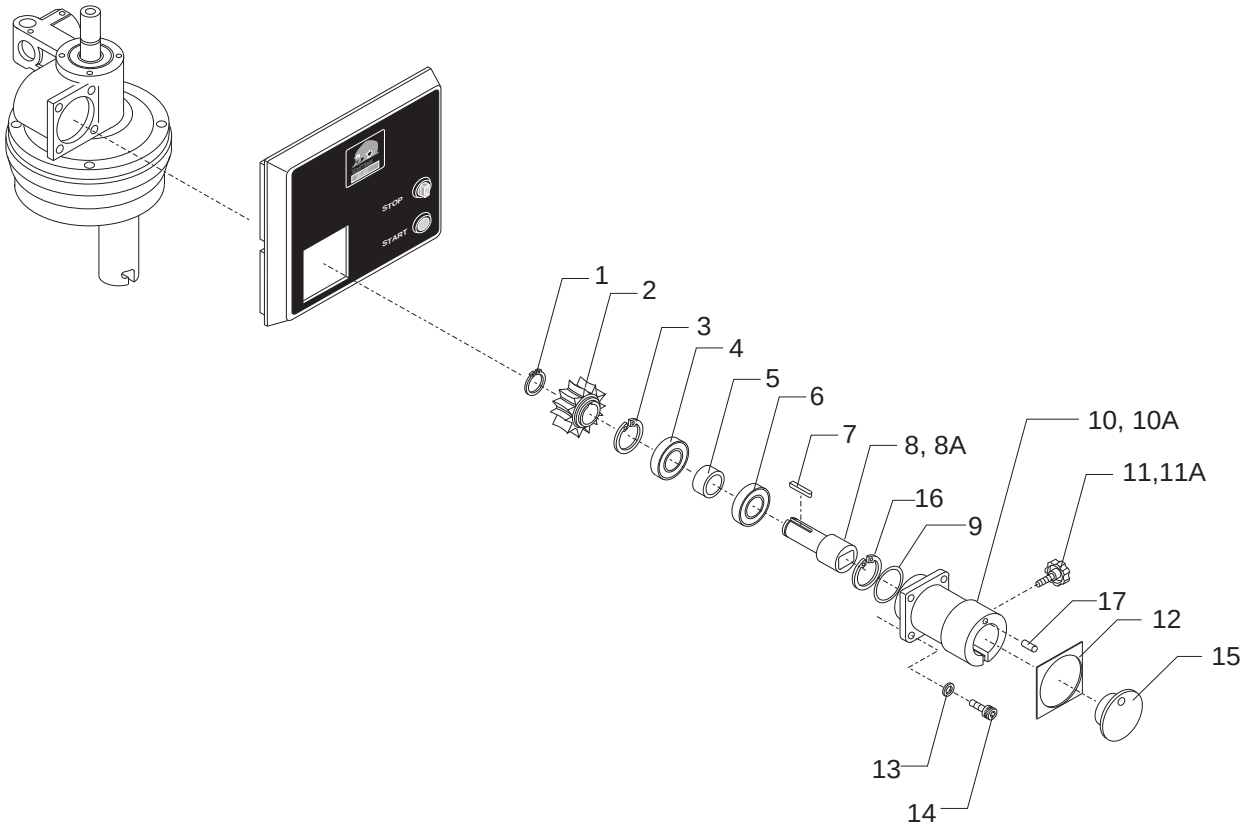


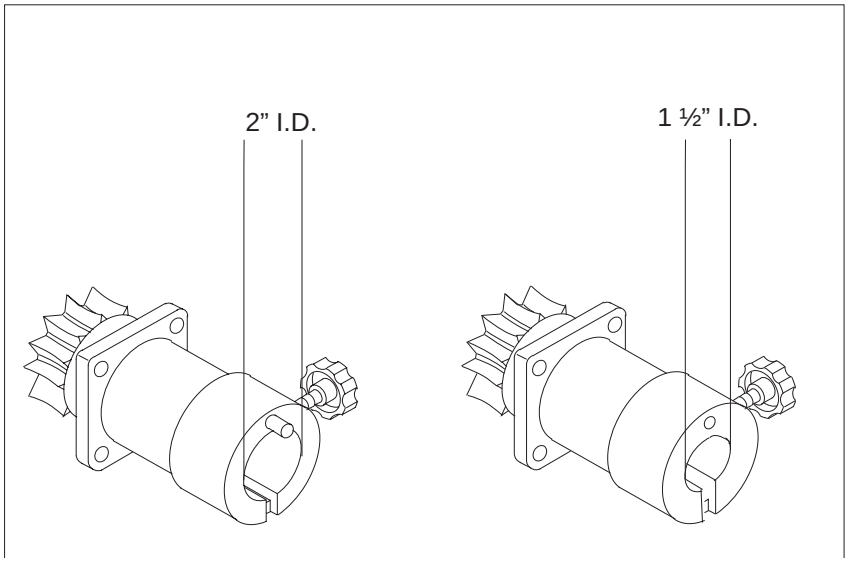
20-36

20N-101

Planetary Head

Figure Number	Description	Part Number
1.	Snap Ring	STA 3414
2.	Bearing 6206	20-98
3.	Snap Ring	STA 3518
4.	Bolt M6X16	STA 5432
5.	Main Bearing Head	20N-3
6.	Snap Ring	STA 3518
7.	Bearing 6206	20-98
8.	Distance Piece	20-37
9.	Gear Wheel Rim	20N-1
10.	Bolt M8X30	STA 5626
11.	Main Shaft	20N-30
12.	Snap Ring	STA 3470
13.	Eccentric Disc	20-36
14.	Bearing 6006	20-100
15.	Snap Ring	STA 3515
16.	Snap Ring	STA 3414
17.	Seal	20N-108R
18.	Needle Bearing Race	See item 25
19.	Groove Pin	STA 6460
20.	Needle Bearing set	20-96
21.	Disc	20-235
22.	Upper Rim Pinion	20-31
23.	Lower Rim Pinion	20-32
24.	Eccentric Head	20N-2
25.	Needle Bearing	20N-101
26.	Bolt	STA 5641
27.	Distance Piece	20-34
28.	Bearing 6205	20-97
29.	Distance Piece	20-34
30.	Snap Ring	STA 3514
31.	Key	STA 2008
32.	Bayonet Shaft	20-33
33.	Stainless Cover	20-272
34.	Black Cover	20++-272.1
35.	Rubber Ring	20-209





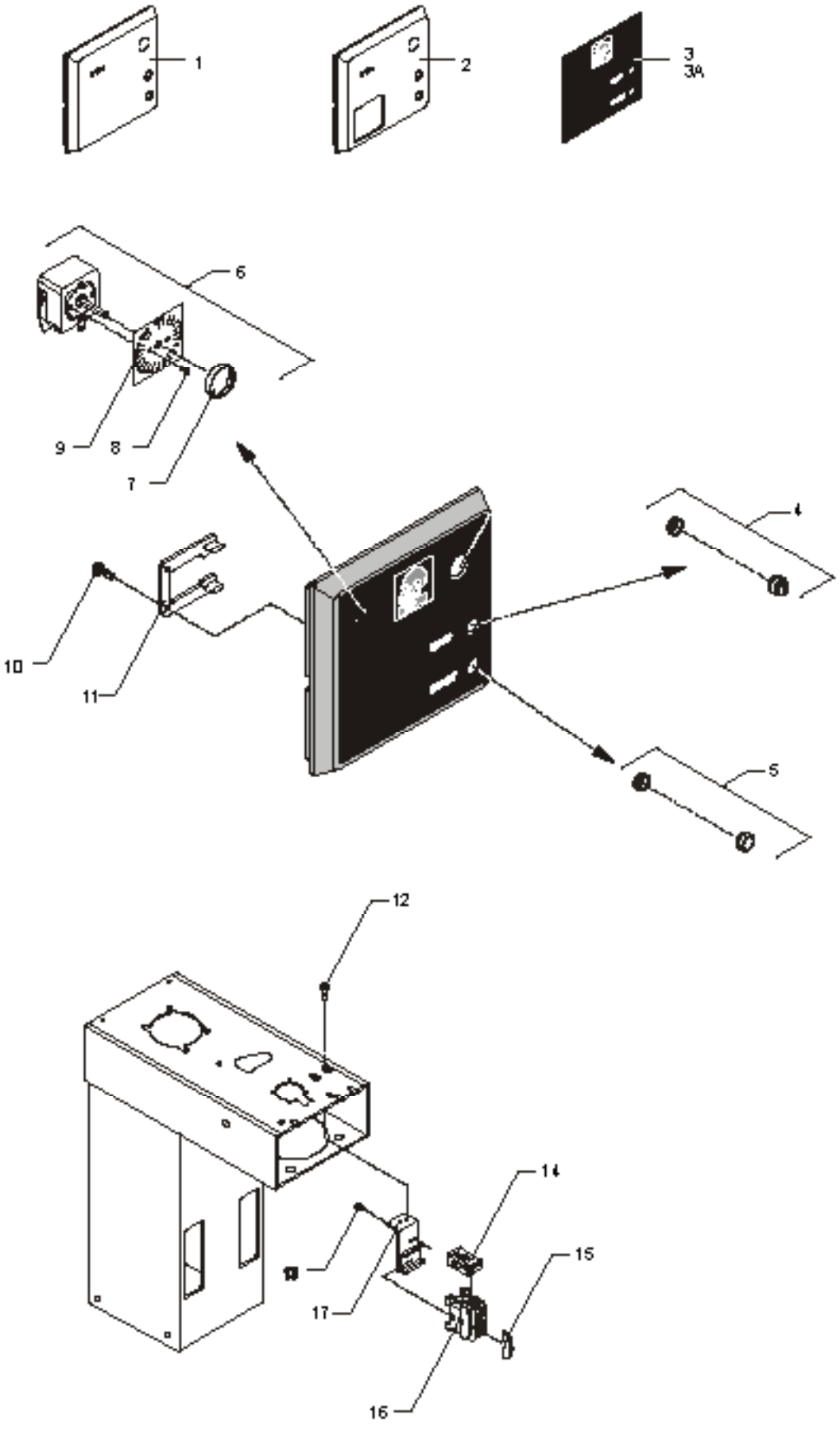
20N-10.5M
#17 Hub

20N-10.6M
#12 Hub

Attachment Drive

Figure Number	Description	Part Number
1.	Snap Ring	STA 3410
2.	Wormwheel	20N-9
3.	Snap Ring	STA 3512
4.	Bearing	15-105
5.	Distance Piece	20N-37
6.	Bearing	15-105
7.	Key	STA 2031
8.	Shaft F/ #17 Hub	20N-50
8A	Shaft F/ #12 Hub	20J-50
9.	O-ring	STA 3127
10.	Hub F/ #17 (*2" I.D.)*	20N-8
10A.	Hub F/ #12 (*1 1/2" I.D.)*	20J-8
11.	Thumb Screw F/ #17 M10 x1.5	STA 5561
11A.	Thumb Screw F/ #12 M8 x 1.5	4R-125
12.	Hub Ring	20N-211
13.	Lock Washer	STA 6038
14.	Bolt	STA 5631
15.	Cover F/ #17	15-214
15A	Cover F/ #12	312C
16.	Snap Ring	STA 3512
17.	Hub Pin	STA 6316

Electrical Components 1993-mid 1997



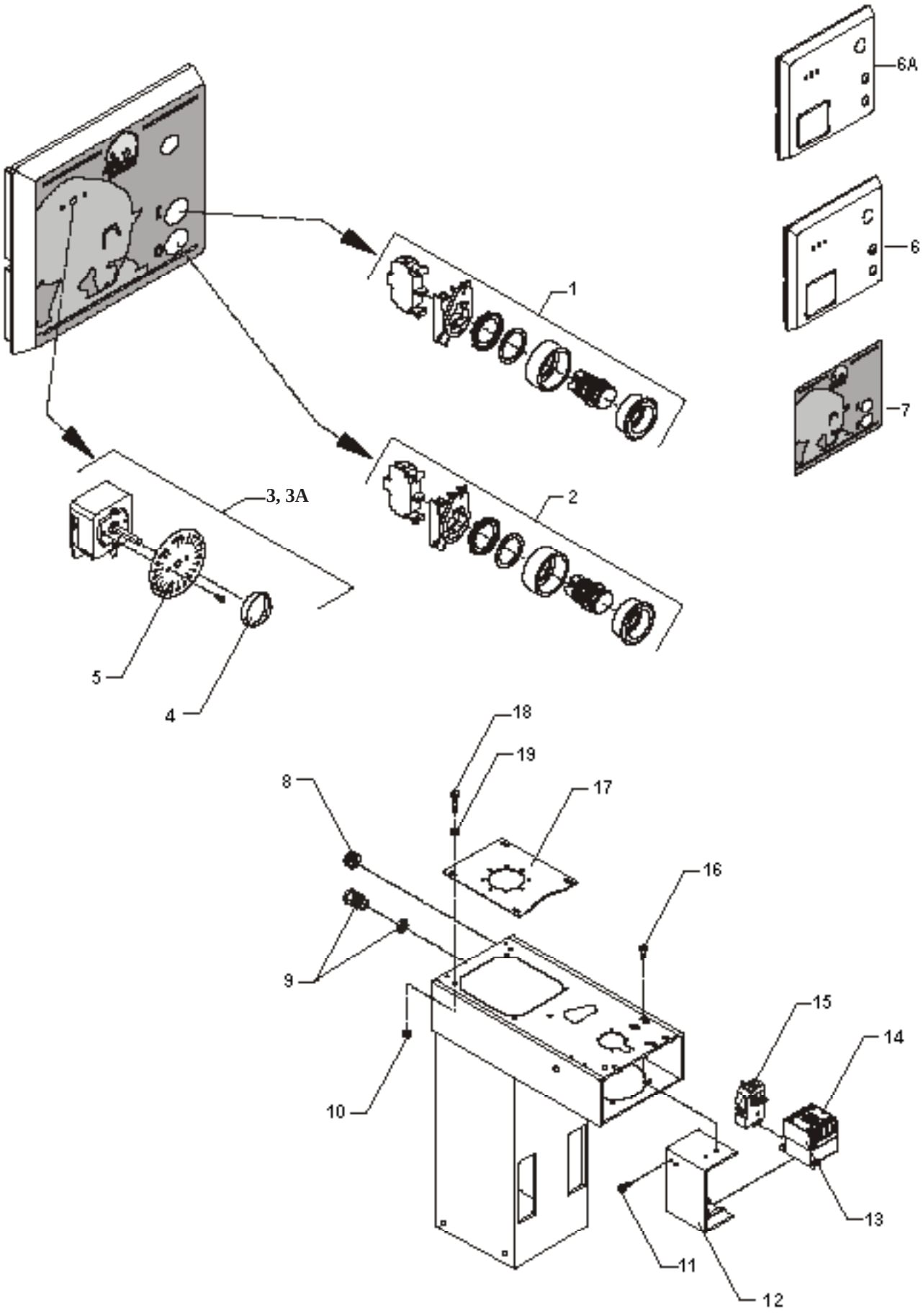
Electrical Components 1993-mid 1997

Figure Number	Description	Part Number
1.	Front Panel No Hub	No Longer Available*
2.	Front Panel w/Hub	No Longer Available**
3.	Front Foil No Hub	No Longer Available
3A	Front Foil w/ Hub	No Longer Available
4.	Stop Button Complete	30-175
5.	Start Button Complete	30-174
6.	Timer Assembly 115V	20-188.15M
7.	Timer Knob	30-189
8.	Timer Screw(s)	STA 5121
9.	Timer Scale	30-190
10.	Screw	STA 5230
11.	C Plate for Switch	20N-176.5
12.	Screw for Bracket	STA 5230
13.	Screw	STA 5230
14.	Thermal Overload 11-16	20-88.24
15.	Auxiliary Switch	20-88.45
16.	Contactor 110V 16 A	100-88.4
17.	Contactor Bracket	20N-151

* Unit must be retrofitted with new style Front panel assembly (PN 20N-650.3M No Hub)and contactor bracket (PN 20N-151.2)

** Unit must be retrofitted with new style Front panel assembly (PN 20N-650.8M w/Hub)and contactor bracket (PN 20N-151.2)

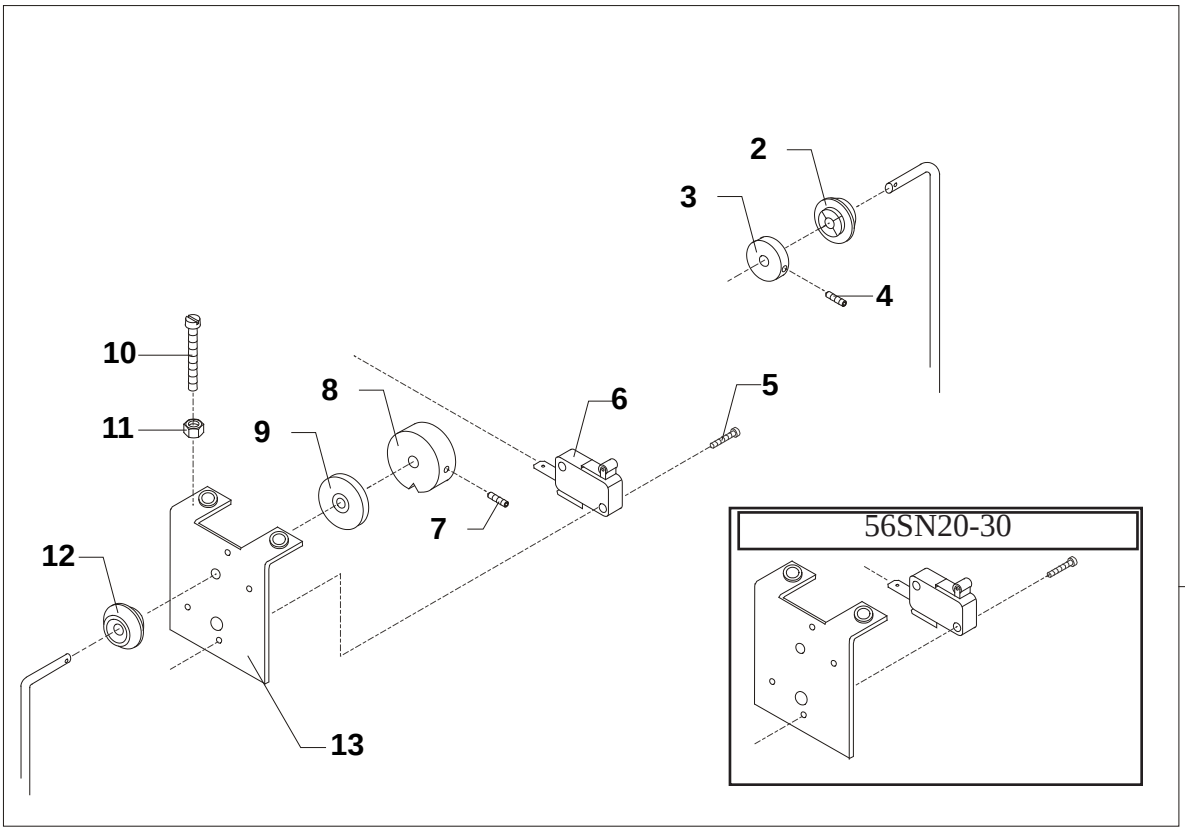
Electrical Components 1998-Present

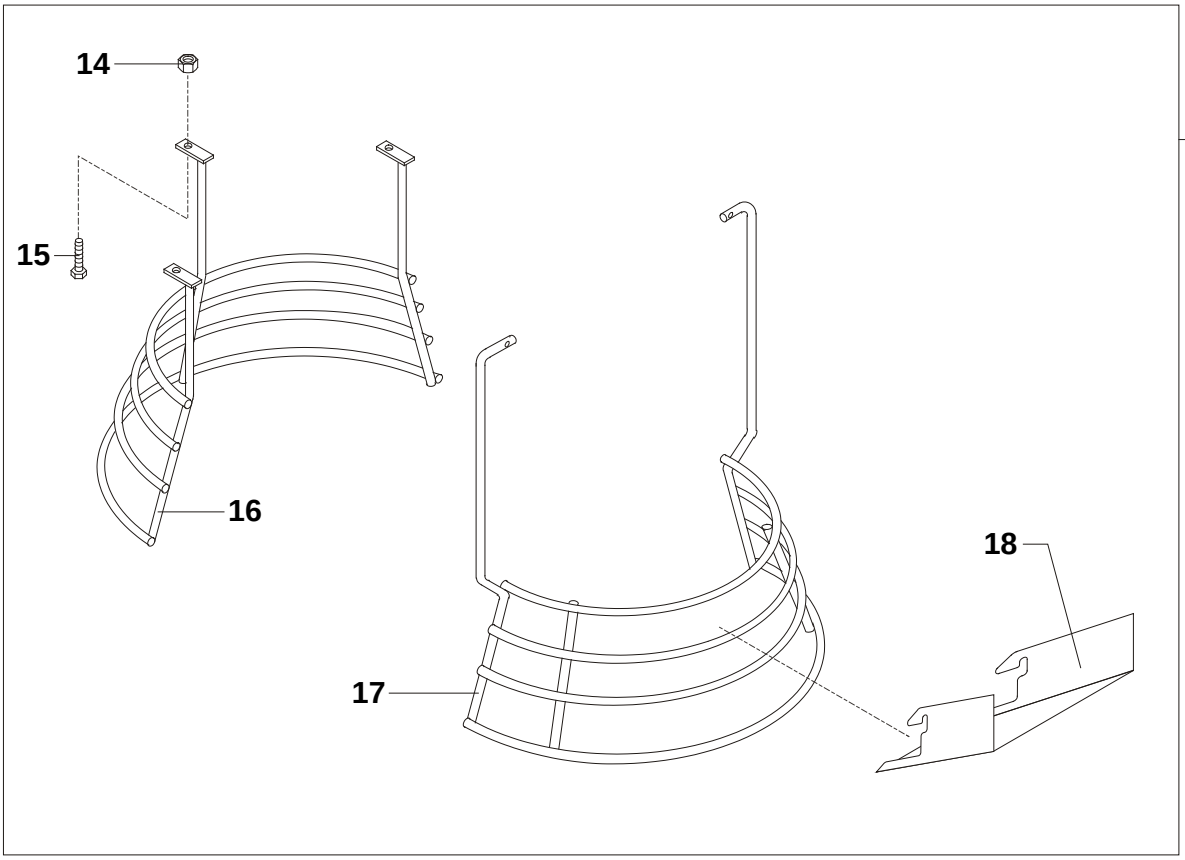


Electrical Components 1998-Present

Figure Number	Description	Part Number
1.	Start Switch Assembly	31-174.2
2.	Stop Switch Assembly	31-174.3
3	Timer Assembly 115V	20-188.15M
3A.	Internal Timer 3-3000 Sec 110V (for McDonald's)	WN20-188.1
4.	Timer Knob	30-189
5.	Timer Scale	30-190
6.	Front Panel Assembly No Hub	20N-650.3M
6A.	Front Panel Assembly Hub	20N-650.8M
7	Front Foil w/ Hub	20N-149.1.2
7A.	Front Foil w/o Hub	20N-149.1.1
8.	Motor Cable Grommet	STA 3000
9.	Tension Relief	STA 3002
10.	Screw	STA 5851
11.	Screw	STA 5232
12.	Contactor Bracket	20N-151.2
13.	Auxiliary Switch	20-88.47
14.	Contactor 110V 16 A	100-88.4
15.	Thermal Overload 11-16	20-88.24
16.	Screw	STA 5232
17.	Motor Mount Plate	20N-61
18.	Bolt	STA 5432
19.	Washer	STA 6008

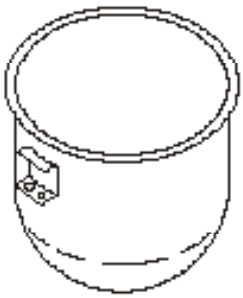
Bowl Screen





Bowl Screen

Figure Number	Description	Part Number
1.	Bowl Screen Kit	225/20N
2.	Bushing	56SN20-21.1
3.	Cam	56SN20-21
4.	Set Screw	STA 5664
5.	Screw	STA 5251
6.	Microswitch	56SN20-30
7.	Set Screw	STA 5664
8.	Cam	56SN20-22.1
9.	Spacer	56SN20-24
10.	Bolt	STA 5850
11.	Nut	STA 5816
12.	Bushing	56SN20-21.1
13.	Bracket Assembly	56SN30-13
14.	Nut	STA 5850
15.	Bolt	STA 5360
16.	Rear Screen	225/20NR
17.	Front Screen	225/20NF
18.	Chute	56G20-280



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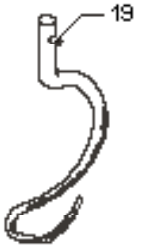

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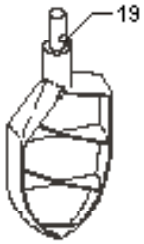

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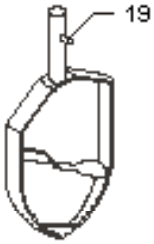

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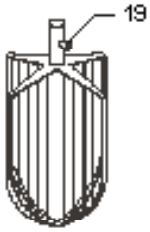
12, 13



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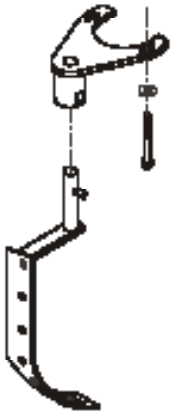

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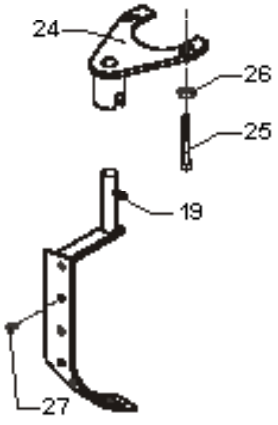

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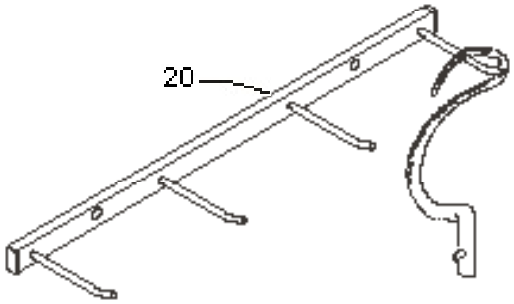
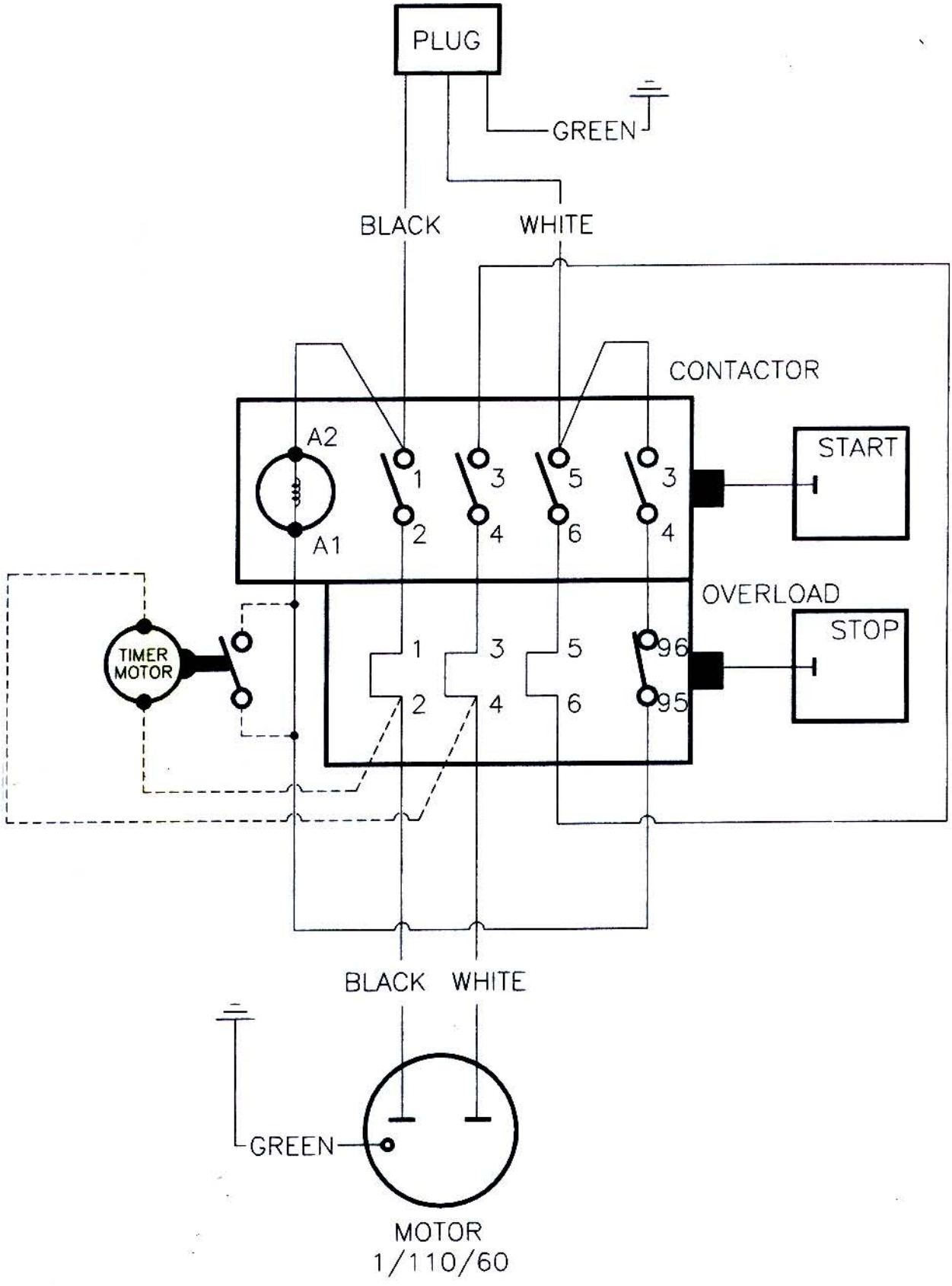
23, 23A



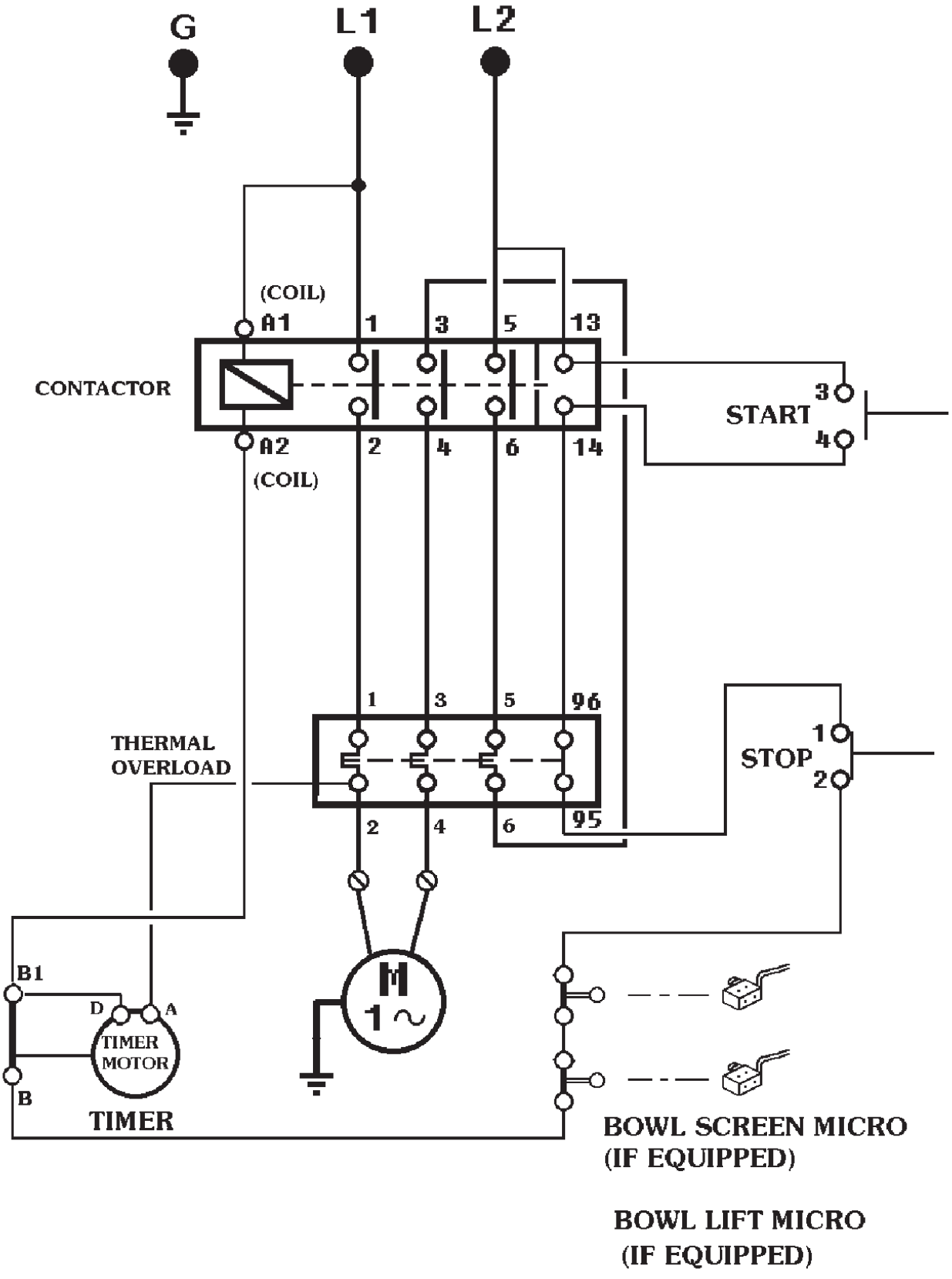
Tools and Attachments

Figure Number	Description	Part Number
1.	S/S Bowl 20Qt	203/20N
2.	S/S Bowl 12Qt.	203/12N
3.	S/S Bowl 25Qt.	203/20C
4.	S/S Hook 20Qt.	213/20A
5.	S/S Hook 12Qt.	213/12N
6.	Flat Beater 20Qt.	205/20A
7.	Flat Beater 12Qt.	205/12N
8.	S/S Flat Beater 20 Qt.	204/20A
12.	Wire Whip 20 Qt.	207/20A
13.	Wire Whip 12 Qt.	207/12N
16.	S/S Wing Whip 20 Qt.	209/20A
19.	Pin	STA 6259
20.	Rack	222
21.	Bowl Scraper 20 Qt.	224/20A
21A	Bowl Scraper 12 Qt.	224/12N
22.	Arm W / Blade 20 Qt.	42R20-102
22A	Arm W / Blade 12 Qt.	42RN12-102
23.	Nylon Blade 20 Qt.	42R20-204
23A	Nylon Blade 12 Qt.	42RN12-204
24.	Scraper Holder	42R20-101M
25.	Bolt	STA 5648
26.	Washer	STA 6020

1993 - 1997

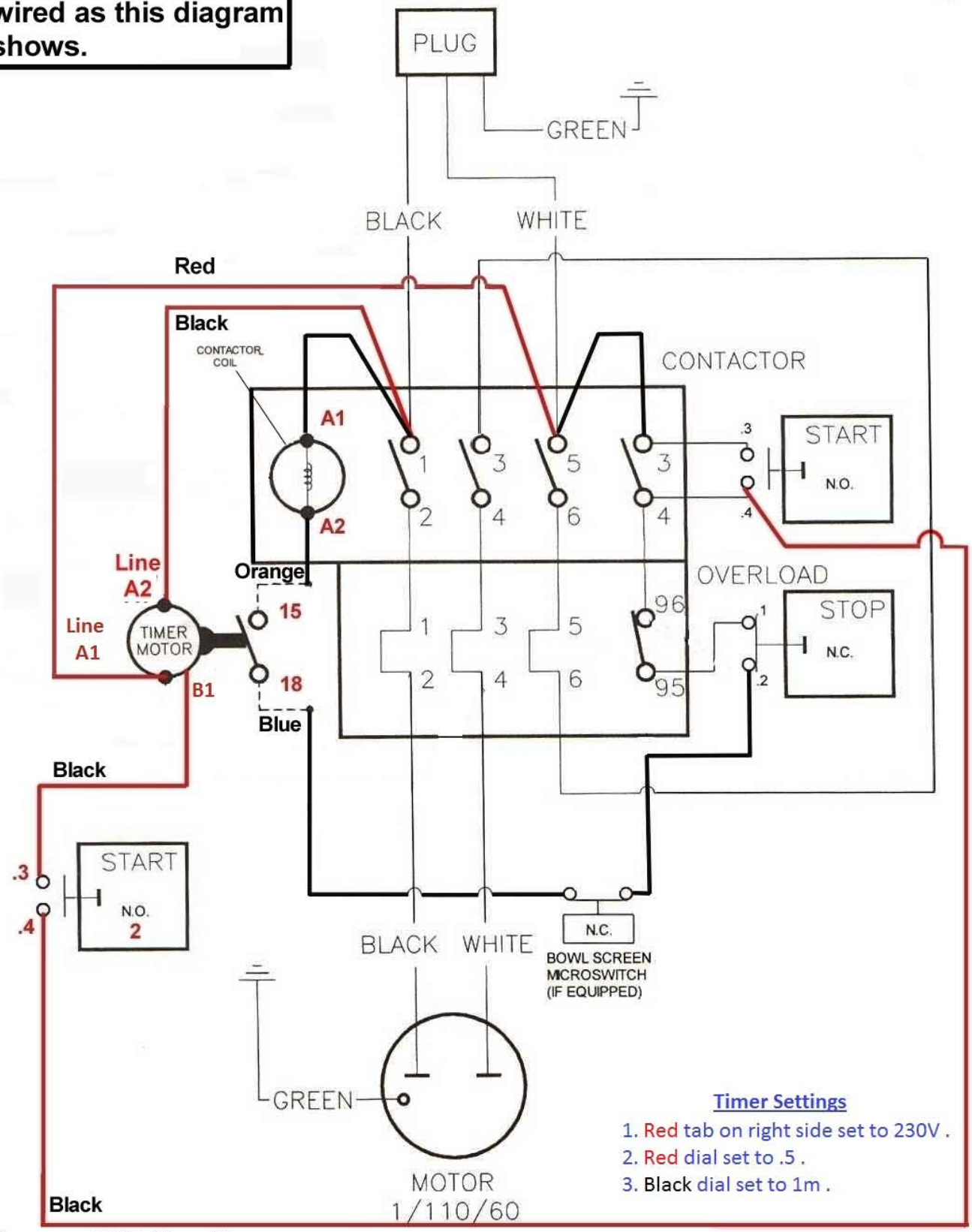

PLUG
GREEN
BLACK
WHITE
CONTACTOR
A2
A1
1
2
3
4
5
6
3
4
START
OVERLOAD
STOP
TIMER MOTOR
1
2
3
4
5
6
96
95
BLACK
WHITE
GREEN
MOTOR
1/110/60

1998-
1 PHASE


G
L1
L2
(COIL)
A1
1
3
5
13
CONTACTOR
START
3
4
A2
(COIL)
2
4
6
14
1
3
5
96
THERMAL
OVERLOAD
STOP
1
2
2
4
6
95
B1
D
A
TIMER
MOTOR
B
TIMER
M
1~
BOWL SCREEN MICRO
(IF EQUIPPED)
BOWL LIFT MICRO
(IF EQUIPPED)

Note: It is critical that the timer motor is wired as this diagram shows.

1998 –



Timer Settings

1. Red tab on right side set to 230V .
2. Red dial set to .5 .
3. Black dial set to 1m .

Green LED On: Power on
Yellow LED On/Off: relay status
Green LED is blinking: Indication of timing period

Notes:

14240 South Lakes Drive
Charlotte, NC 28273
(800) 222-1138
www.varimixer.com